ABSTRACT OF THE DISCLOSURE

According to embodiments of the subject matter disclosed in this application, a large audio database in a multiprocessor system may be searched for a target audio clip using a robust and parallel search method. The large audio database may be partitioned into a number of smaller groups, which are dynamically scheduled to available processors in the system. Processors may process the scheduled groups in parallel by partitioning each group into smaller segments, extracting acoustic features from the segments; and modeling the segments using a common component Gaussian Mixture model ("CCGMM"). One processor may also extract acoustic features from the target audio clip and model it using the CCGMM. Kullback-Leibler (KL) distance may be further computed between the target audio clip and each segment. Based on the KL distance, a segment may be determined to match the target audio clip; and/or a number of following segments may be skipped.